

REMARKS

This paper is submitted in reply to the Office Action dated September 19, 2006, within the three-month period for response. Reconsideration and allowance of all pending claims are respectfully requested.

In the subject Office Action, claims 37 and 38 were rejected under 35 U.S.C. § 101. Additionally, claims 1-14, 19-30 and 35-38 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Application Publication No. 2001/0056451 to Kampe et al. The Examiner did indicate, however, that claims 15-18 and 31-34 were directed to patentable subject matter.

Applicants respectfully traverse the Examiner's rejections to the extent that they are maintained. Applicants have amended claims 37-38 herein, and Applicants respectfully submit that no new matter is being added by the above amendments, as the amendments are fully supported in the specification, drawings and claims as originally filed.

Now turning to the subject Office Action, and initially to the § 101 rejection of claims 37 and 38, the Examiner will note that Applicants have amended claim 37 to recite a "physical computer readable signal bearing medium" and have amended claim 38 to exclude a transmission medium. Applicants respectfully submit that claims 37 and 38 are now directed to statutory subject matter, and comply with the Office's current guidelines. Withdrawal of the § 101 rejection is therefore respectfully requested.

Next, turning to the art-based rejections, and specifically to the rejection of independent claim 1, this claim generally recites a method of organizing a plurality of members in a primary-backup group in a clustered computer system. The method includes forming a primary subgroup including at least one member from the plurality of members, wherein each member in the primary subgroup has access to a common primary resource, and forming a backup subgroup including at least one member from the plurality of members, wherein each member in the backup subgroup has access to a common backup resource.

Claim 1 is rejected as being anticipated by Kampe. As an initial matter, it should be noted that a "group" as used in claim 1 is analogous to a "cluster" as used in Kampe.

Fig. 1 of Kampe discloses a network with multiple clusters, with each cluster including a plurality of nodes. As such, Fig. 2 of Kampe, upon which the Examiner relies, illustrates a single group that includes a primary node 50 and a secondary node 60, with the primary node including a primary repository 54 managed by a primary repository manager 52 and a secondary repository 64 managed by a secondary repository manager 62.

It is important to note, however, that Kampe does not disclose the concept of a "subgroup." Claim 1 recites both a primary subgroup and a backup subgroup, with each member of the primary subgroup having access to a common primary resource, and with each member of the backup subgroup having access to a common backup resource.

Kampe, on the other hand, discloses a single primary node 50 that manages a single primary repository 54, as well as a single secondary node 60 that manages a single secondary repository 64. There is no disclosure in the reference, however, that either repository 54, 64 can be managed by multiple members, much less multiple members arranged into a logical entity analogous to a "subgroup." The specific passages relied upon by the Examiner, at paragraphs [0025], [0029] and [0030], do not disclose, or even suggest that any other member or node can manage either resource 54, 64. In fact, paragraph [0031] discloses that primary and secondary manager 52, 62 run on two nodes, and that the remaining nodes 70 run a repository agent 72 that interfaces with primary repository manager 52, forwarding read and write requests to the repository manager to access data from the repository. There is no disclosure in the reference, however, that any of these nodes 70 is capable of accessing primary repository 54 directly, or of taking over and hosting a repository manager.

Applicants also submit that nodes 50 and 60 individually cannot be considered to constitute primary and backup subgroups. Claim 1 recites "forming a primary subgroup" and "forming a secondary subgroup", and as such, despite the fact that nodes 50 and 60 respectively manage primary and secondary repositories, there is no disclosure in the reference of any operation that is analogous to "forming a subgroup."

As such, Applicants submit that claim 1 is novel over Kampe, and the rejection should be withdrawn.

Claim 1 is also non-obvious over Kampe as there is no suggestion in the reference, or anywhere else in the prior art of record, of the desirability of forming subgroups, or even of enabling multiple nodes or members to manage or have access to either repository 54, 64. Consequently, there is no suggestion in the art that would motivate one of ordinary skill in the art to modify Kampe to include subgroups as is recited in claim 1.

Applicants therefore respectfully submit that claim 1 is patentable over Kampe and the other prior art of record. Reconsideration and allowance of independent claim 1, and of claims 2-8 which depend therefrom, are therefore respectfully requested.

Next, with regard to the rejection of independent claim 9, this claim generally recites a method of joining a member to a primary-backup group in a clustered computer system. The method includes determining to which of a plurality of resources managed by the primary-backup group the joining member has access, the plurality of resources including a primary resource and at least one backup resource, and adding the joining member to a subgroup for a resource among the plurality of resources to which the joining member has access, wherein the subgroup is among a plurality of subgroups defined in the primary-backup group, wherein each subgroup is associated with a resource among the plurality of resources, and wherein each member of each subgroup has access to the resource with which such subgroup is associated.

Claim 9 is also rejected as being anticipated by Kampe, and specifically based upon paragraph [0034] thereof. However, as discussed above, Kampe does not disclose or suggest the concept of "subgroups" used to manage different resources accessible by a group in a clustered computer system. Paragraph [0034] discloses, at the most, that primary services are co-located on the same primary node, and that secondary services are co-located on the same secondary node. It should also be noted, however, that paragraph [0037] discloses that when a repository service is started, the repository is started in an empty state. As such, whenever a primary node is started, it is done so before the repository even exists.

Claim 9 recites that when a member is joined to a primary-backup group, a determination is made as to which of a plurality of resources the joining member has

access. Kampe, however, does not make any such determination. In fact, it appears from paragraph [0037] that a repository does not even exist at the time that a member is joining the group or cluster – instead the repository is created once the group is established.

Claim 9 also recites that the joining member is added to a subgroup for a resource to which the joining member has access, and that "each member of each subgroup has access to the resource with which such subgroup is associated.". Again, Kampe has no appreciation for the concept of a subgroup, and as such, cannot be considered to disclose "adding" a joining member to a subgroup, much less doing so in a subgroup having the characteristics recited in claim 9.

As such, claim 9 is novel over Kampe, and the rejection should be withdrawn.

Claim 9 is also non-obvious over Kampe, as there is no suggestion in the art of record that would motivate one of ordinary skill in the art to modify Kampe to incorporate the concept of a subgroup, or even to determine what resources a joining member can access in connection with joining a member to a primary-backup group, as recited in claim 9.

Applicants therefore respectfully submit that claim 9 is patentable over Kampe and the other prior art of record. Reconsideration and allowance of independent claim 9, and of claims 10-20 which depend therefrom, are therefore respectfully requested.

Next with regard to the rejections of independent claim 21, this claim generally recites in part program code configured to organize a plurality of members into a primary-backup group by forming primary and secondary subgroups. As discussed above in connection with claim 1, Kampe does not disclose or suggest the concept of subgroups as presently claimed. Accordingly, claim 21 is patentable over Kampe for the same reasons as presented above with respect to claim 1. Reconsideration and allowance of independent claim 21, and of claims 22-26 which depend therefrom, are therefore respectfully requested.

Next with regard to claims 27 and 37, each claim recites in part the concepts of determining to which of a plurality of resources managed by a primary-backup group a joining member has access, and adding the joining member to a subgroup for a resource to which the joining member has access. As discussed above in connection with claim 9,

these concepts are not disclosed or suggested by Kampe. Accordingly, claims 27 and 37 are patentable over Kampe for the same reasons as presented above with respect to claim 9. Reconsideration and allowance of independent claims 27 and 37, and of claims 28 -36 and 38 which depend therefrom, are therefore respectfully requested.

As a final matter, Applicants traverse the Examiner's rejections of the dependent claims based upon their dependency on the aforementioned independent claims. Nonetheless, Applicants do note that a number of these claims recite additional features that further distinguish these claims from the references cited by the Examiner.

For example, claims 3 and 22 recite the selection of a primary host member from the primary subgroup and selecting a backup host member from the backup subgroup. Kampe, which does not disclose subgroups, and which does disclose only one member capable of hosting a primary or secondary resource, cannot be considered to disclose or suggest "selecting" a host member from a subgroup.

Claims 5 and 23 recite communicating resource configuration data from a primary host member to any other member of a primary subgroup, and doing the same for the backup subgroup. Again, Kampe, which does not disclose subgroups, and which discloses only one member capable of hosting a primary or secondary resource, does not and would not communicate data from a host member to another member of a subgroup.

Claims 7 and 25 recite the formation of a second backup subgroup having access to a second backup resource. Kampe discloses only a single backup repository, and does not suggest multiple backup repositories.

Claims 10 and 28 recite determining to which resources a joining member is capable of hosting. Since Kampe forms a repository after a group is created, Kampe would have no need to make any such determination.

Claims 13-14 and 30 recite either sending or receiving configuration data to or from another member of the same subgroup. Since Kampe does not disclose subgroups, and discloses only a single member or node capable of hosting a particular resource, does not and would have a need for any such functionality.

None of the features recited in these dependent claims are disclosed or suggested by Kampe. As such, reconsideration and allowance of these claims for the reasons stated above are therefore respectfully requested.

In summary, Applicants respectfully submit that all pending claims are novel and non-obvious over the prior art of record. Reconsideration and allowance of all pending claims are therefore respectfully requested. If the Examiner has any questions regarding the foregoing, or which might otherwise further this case onto allowance, the Examiner may contact the undersigned at (513) 241-2324. Moreover, if any other charges or credits are necessary to complete this communication, please apply them to Deposit Account 23-3000.

Respectfully submitted,

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Date

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